

## WHAT IS CLAIMED IS:

1. A method for attenuating adhesions between an implant and surrounding tissue  
5 following a surgical procedure in a patient, the method comprising:  
    providing a non-porous, resorbable polymer base material; and  
    applying the resorbable polymer base material in a form of a resorbable thin membrane  
around the implant to thereby cover substantially all exposed surfaces of the implant, wherein the  
resorbable thin membrane is substantially non-porous and comprises a layer of polymer base  
10 material selected from the group consisting essentially of:  
    a lactide polymer; and  
    a copolymer of two or more cyclic esters.
2. The method according to claim 1, wherein:  
15 the resorbable thin membrane comprises a substantially planar membrane of resorbable  
polymer base material having a first substantially smooth side and a second substantially smooth  
side, the substantially planar membrane of resorbable polymer base material having a substantially  
uniform composition;  
    the membrane of polymer base material comprises a single layer of resorbable polymer  
20 base material having a thickness, measured between the first substantially smooth side and the  
second substantially smooth side, that is between about 10 microns and about 100 microns; and  
    the single layer of resorbable polymer base material is adapted to maintain a smooth-  
surfaced barrier between the implant and surrounding tissue, and is adapted to be resorbed into a  
mammalian body within a period of less than approximately 24 months from an initial  
25 implantation of the implant into the patient.
3. The method according to claim 1, wherein the polymer base material comprises  
about 60-80% of L-lactide and about 20-40% of D,L-lactide.

4. The method according to claim 1, wherein the resorbable thin membrane is in contact with the surfaces of the implant when it is applied to the implant.

5. The method according to claim 1, wherein the step of applying the thin membrane onto the implant comprises a technique selected from the group consisting of wrapping, interweaving, blanketing, draping, taping, adjacent placement, juxtaposed positioning and sandwiching of the membrane onto the implant.

6. The method according to claim 1, wherein the step of applying the thin membrane onto the implant comprises heat-shrinking the thin membrane around the implant.

7. The method according to claim 1, wherein the step of applying the thin membrane onto the implant comprises:

dissolving a polymer material in a solvent to form a solution; and  
coating the implant with the solution.

8. The method according to claim 7, wherein the polymer material is selected from the group consisting essentially of a lactide polymer and a copolymer of two or more lactides; and the solvent is selected from the group comprising ethyl acetate, acetonitrile, acetone, methyl ethyl ketone, tetrahydrofuran, methyl pyrrole, and any combination thereof.

9. The method according to claim 8, wherein the solution comprises a concentration in the range of about 0.1 to about 5.0% of the polymer.

10. The method according to claim 7, further comprising a step of drying the coated implant before placement into a surgical site.

11. The method according to claim 10, wherein the step of drying comprises drying the coated implant in a vacuum oven.

12. The method according to claim 11, further comprising the step of air drying the coated implant before placement in the vacuum oven.

13. The method according to claim 7, wherein the step of coating the implant comprises spraying the implant with the solution.

14. The method according to claim 1, wherein the implant comprises biological material.

15. The method according to claim 14, wherein the biological material comprises grafting material.

16. The method according to claim 15, wherein the grafting material is selected from the group consisting of autograft material, xenograft material, allograft material, and combinations thereof.

17. The method according to claim 15, wherein the grafting material is selected from the group consisting of veins, arteries, heart valves, skin, dermis, epidermis, nerves, tendons, ligaments, bone, bone marrow, blood, white blood cells, red blood cells, gonadocytes, embryos, cells, adipose, fat, muscle, cartilage, fascia, membranes, pericardium, plura, periosteum, peritoneum and dura.

18. The method according to claim 15, wherein the surrounding tissue is selected from the group comprising fascia, soft tissues, muscle, organs, fat, adipose, membranes, pericardium,

plura, periostium, peritoneum, dura, bowels, intestines, ovaries, veins, arteries, epidermis, tendons, ligaments, nerves, bone and cartilage.

19. The method according to claim 1, wherein the implant comprises a transplanted  
5 organ.

20. The method according to claim 19, wherein the surrounding tissue is selected from the group comprising fascia, soft tissues, muscle, organs, fat, adipose, membranes, pericardium, plura, periostium, peritoneum, dura, bowels, intestines, ovaries, veins, arteries, epidermis,  
10 tendons, ligaments, nerves, bone and cartilage.

21. The method according to claim 1, wherein the implant comprises non-biological material.

15 22. The method according to claim 21, wherein the implant comprises a medical device.

23. The method according to claim 22, wherein the medical device is selected from the group consisting of bone graft substitutes, bone cement, tissue glues and adhesives, bone fixation  
20 members, defibrillators, eye spheres, sutures, staples, cochlear implants, pumps, artificial organs, non-resorbable membranes, bone growth stimulators, neurological stimulators, dental implants, guided tissue and guided bone regeneration membranes, eye lid weights and tympanostomy tubes.

24. The method according to claim 22, wherein the medical device comprises a fluid-  
25 filled prosthesis.

25. The method according to claim 23, wherein the surrounding tissue is selected from the group comprising fascia, soft tissues, muscle, organs, fat, adipose, membranes, pericardium,

plura, periostium, peritoneum, dura, bowels, intestines, ovaries, veins, arteries, epidermis, tendons, ligaments, nerves, bone and cartilage.

26. The method according to claim 24, wherein the surrounding tissue is selected from  
5 the group comprising fascia, soft tissues, muscle, organs, fat, adipose, membranes, pericardium, plura, periostium, peritoneum, dura, bowels, intestines, ovaries, veins, arteries, epidermis, tendons, ligaments, nerves, bone and cartilage.

27. The method according to claim 24, wherein the fluid-filled prosthesis comprises a  
10 breast implant.

28. The method according to claim 27, wherein the breast implant comprises a saline implant contained within a silicone casing.

15 29. The method according to claim 22, wherein the implant comprises a pacemaker.

30. An apparatus comprising:  
an implant configured to be inserted into a surgical site of a patient surrounded by tissue,  
wherein when the implant is inserted into the surgical site, tissue surrounds and contacts  
20 substantially all of an exterior surface of the apparatus; and  
a resorbable membrane surrounding the implant for attenuating adhesions between the  
implant and the surrounding tissue, the resorbable membrane being disposed over substantially all  
of the exterior surface of the implant.

25 31. The apparatus according to claim 30, wherein the implant comprises a biological implant.

32. The apparatus according to claim 31, wherein the biological implant comprises a transplanted organ.

5 33. The apparatus according to claim 31, wherein the biological implant comprises grafting material.

34. The method according to claim 33, wherein the grafting material is selected from the group consisting of autograft material, xenograft material, allograft material, and combinations thereof.

10 35. The method according to claim 34, wherein the grafting material is selected from the group consisting of veins, arteries, heart valves, skin, dermis, epidermis, nerves, tendons, ligaments, bone, bone marrow, blood, white blood cells, red blood cells, gonadocytes, embryos, cells, adipose, fat, muscle, cartilage, fascia, membranes, pericardium, plura, periostium, peritoneum and dura.

36. The method according to claim 31, wherein the surrounding tissue is selected from the group comprising fascia, soft tissues, muscle, organs, fat, adipose, membranes, pericardium, plura, periostium, peritoneum, dura, bowels, intestines, ovaries, veins, arteries, epidermis, tendons, ligaments, nerves, bone and cartilage.

20 37. The apparatus according to claim 30, wherein the implant comprises a non-biological body.

25 38. The apparatus according to claim 37, wherein the non-biological body comprises a medical device selected from the group consisting of bone graft substitutes, bone cement, tissue glues and adhesives, bone fixation members, defibrillators, eye spheres, sutures, staples, cochlear implants, pumps, artificial organs, non-resorbable membranes, bone growth stimulators,

neurological stimulators, dental implants, guided tissue and guided bone regeneration membranes, eyelid weights and tympanostomy tubes.

5        39.     The apparatus according to claim 30, wherein the resorbable membrane comprises a heat-shrunk thin membrane disposed around the implant.

40.     The apparatus according to claim 39, wherein the membrane comprises at least one layer of resorbable polymer base material.

10       41.     The apparatus according to claim 40, wherein the membrane comprises a single layer of resorbable polymer base material.

42.     The apparatus according to claim 41, wherein the single layer of resorbable material has a thickness between about 10 microns and about 100 microns.

15       43.     The apparatus according to claim 30, wherein the membrane comprises a substantially planar membrane having a first substantially smooth side and a second substantially smooth side.

20       44.     The apparatus according to claim 40, wherein the polymer base material has a substantially uniform composition.

45.     The apparatus according to claim 44, wherein the polymer base material consists essentially of a material selected from the group consisting essentially of:  
25       a lactide polymer; and  
       a copolymer of two or more cyclic esters.

46. The apparatus according to claim 37, wherein the non-biological body comprises a fluid-filled implantable prosthesis.

5 47. The apparatus according to claim 46, wherein the fluid-filled implantable prosthesis comprises a breast implant.

48. The apparatus according to claim 43, wherein the breast implant comprises a saline-type implant in a silicone casing.

10 49. The apparatus according to claim 37, wherein the non-biological body comprises a pacemaker.

15 50. The apparatus according to claim 45, wherein the polymer base material is selected from the group consisting essentially of a lactide polymer and a copolymer of two or more lactides.